

## MORE ABOUT JAPAN.

THE interest that has been awakened in Japan through her wonderful exploits in the war against Russia makes a book on her systems of fighting—both ancient and modern—particularly welcome when military experts are still marvelling at the perfection of her organisation in war time, bringing as it has done the success which follows as the natural result of attention to the smallest details.

In "The Fighting Man of Japan"<sup>1</sup> we have a very interesting little book by Mr. F. J. Norman, who is eminently fitted to discourse on the "Exercises and Training of the Samurai," having passed many years in Japan as instructor to some of the military and civilian colleges. As the author claims the indulgence of his readers in his preface, it is perhaps hardly fair to notice the grammatical errors that occur here and there, and after all they do not alter the interest of the book; but it would have been advisable to omit the blatant advertisements of a certain jujitsu school both at the beginning and end of the book, for the especial benefit of which the author confesses to have written his work.

The book is divided into four chapters, each of which deals with a separate subject. The first gives a rapid sketch of Japanese military history dating from 1543, which is as far back as our European knowledge of it extends, and incidentally giving a description of the spirit which animated the "Samurai" of old—and a very different one, it would appear from Mr. Norman's account, from that which guided our knights and crusaders; but East is East and West is West, and however much the Orientals assimilate our ideas of civilisation and education, the spirit will remain unaltered; their ideals and ours will for ever be as far distant as the poles. One example of this is enough:—"The bushi (or warrior) . . . held to the maxim that 'all is fair in love and war,' and scrupled not to resort to devices of the most dishonourable kind in order to gain a desired object"; and in the case of a hand-to-hand fight, were his opponent to fall or lose his sword this was regarded as the best possible occasion for hacking at him while he was down and unable to defend himself.

Mr. Norman considers the Dutch to have been the first to attempt to train a Japanese naval force, although he allows that the Portuguese and Spanish friars of the sixteenth century must be credited as the first instructors of the "Far Easterners" in the art of shipbuilding and the science of navigation. It is a remarkable fact not generally known that in the fifteenth and sixteenth centuries many modes of self-defence were practised by the Dutch that were almost identical with those used by the Japanese in the art of jujitsu. The question is, Did the Dutch take their ideas to Japan, or were they taught by the Japanese? A very interesting book illustrating many modes of self-defence that are the same as those used to-day by the Japanese was written early in the sixteenth century by one Nicolas Petter.

<sup>1</sup> "The Fighting Man of Japan." By F. J. Norman. (The Training and Exercises of the Samurai.) Pp. xii+79. (London: Archibald Constable and Co., Ltd., 1905.) Price 2s. 6d.

Speaking of the Portuguese and Spanish friars, the name of St. Francis Xavier stands out above all others on account of his wide personal influence among the Japanese, and this clever Jesuit made more converts to the Roman faith than have ever been made since by the missionaries of any other creed. That he loved the Japanese is proved by his writing to France early in the sixteenth century:—"These people (meaning the Japanese) are the delight of my soul." Unfortunately, his good influence was entirely destroyed by the arrival of European traders who exploited the unsuspecting Orientals in such an unprincipled way that they rose *en masse* and massacred almost every one of the foreigners, and after this regarded them with such distrust and detestation that it was many years before they could regain any foothold in the country.

An interesting chapter is that on the education of the naval and military officers, showing what a very fine sieve has to be passed through before the aspir-



FIG. 1.—Corps à Corps à la Japonaise. From "The Fighting Man of Japan."

ants are thought capable and worthy of defending their country either as sailors or soldiers. The system of the fine sieve is of course applied to the officers only in each service; the rank and file receive a sound practical training, but "little or no attention is paid by the officers to the teaching of parade and show movements to their men. . . . Women not occupying the position in Japanese Society they do in the West, little or no pains are taken by the military authorities of the Mikado to cater for their amusement, and the result is one never sees any 'Agricultural Hall tomfoolery' in Japan."

The chapter on "Kenjutsu" deals with the affection the Japanese have always felt for the sword, and the great cleverness they exhibit when using it in a hand-to-hand fight. This cleverness would appear to be the result of much practice in "kenjutsu," for which a "shinai," or practice sword, is used, made from four strips of bamboo bound together at the

handle with a strong leather covering. One illustration here reproduced represents a *corps à corps à la Japonaise*, and, judging from the photograph, it is allowable to combine a trip with a hit, as one fencer is trying to knock his opponent over with a hit at the neck, at the same time taking his leg from under him with a sort of jujitsu trip.

The last chapter describes the sumō or wrestling of the Japanese—to many a most repulsive spectacle on account of the enormously fat bodies of the particular class of men who follow this profession; but a fight between two expert sumōtori is for the Japanese an event of almost national importance, and they flock in thousands to the huge amphitheatre in the centre of which the tussle takes place. The second illustration shows two combatants in a crouching position waiting for a chance to spring at each other.

The last few pages of the book are devoted to jujitsu, but as nothing new is said on this subject and the photographs are very poor there is no need to enter into detailed description. For the rest, a

case. The astronomer seeks a correct ephemeris, but a mathematical instinct seeks to solve the question as a case of the problem of three bodies, and Delaunay's two enormous volumes will show what labours may be undertaken to obtain full literal development of the moon's coordinates which shall be approximate enough to meet the needs of the observer. Unfortunately the expressions when obtained are in many cases so imperfectly convergent that they give neither a solution of the three-bodies-problem nor do they surpass the observations in precision, as calculation should. It seems that unless some wholly new device is found we must be content to separate the problem into two parts, leaving literal developments for special mathematical researches throwing light upon the problem of three bodies, such as G. W. Hill's investigations of periodic moons of different mean motions, and making the developments essentially numerical when they are designed to form the basis for tables, although by so doing the former part loses all observational interest and the latter nearly all that is mathematical. Prof. Brown's theory is neither wholly numerical like that of Hansen nor wholly literal like that of Delaunay. The mean motion alone is treated as numerical, the other constants as eccentricities and inclination appearing in literal form. This was a plan Adams always urged, and from time to time he made considerable studies to give effect to it. When there otherwise remain four parameters according to powers of which each coefficient must converge, it is clearly an immense gain to omit a fifth when that fifth is answerable for all the worst cases of slow convergence; and while the mean motion may be considered known, it is hardly the case with the other constants, the lunar eccentricity, for example, and the ratio of the mean distances of the sun and moon being uncertain within the limits over which debate ranges, so that it is essential that the calculator should not be tied to a single set of elements at the outset.

Besides this idea Prof. Brown's research rests upon two clear and solid supports. First is the use of rectangular moving axes of reference, which he points out—and otherwise it seems to have passed from memory—was developed by Euler. But perhaps as much as anything his success is due to the brilliant transformation of the equations of motion given by G. W. Hill. It detracts not the least from Prof. Brown's achievement that his main ideas and methods are derived from earlier masters. The tools were ready to hand for one who had the learning and judgment to use them. Anyone who has faced a similar task knows that there remain abundant calls for resource and invention, as well as for comprehensive patience, in fitting given plans together and working them out abreast in every remote ramification of a subject, without fidgeting about "originality."

The work is not yet at a stage to put to proof by calculation of an ephemeris, which indeed would need the calculation of lunar places for a great many years backwards and forwards to prove that it is superior to Hansen, or to Hansen *plus* Newcomb. But even now it is almost certain that it will be so. First its methods are more intelligible and above

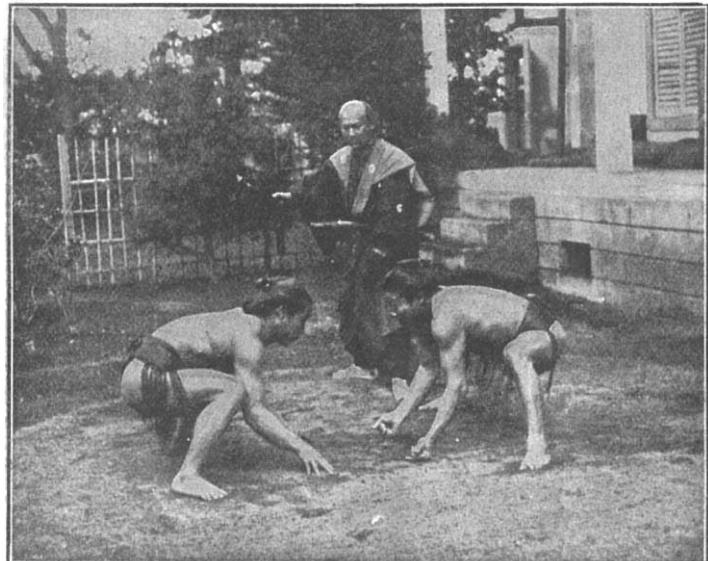


FIG. 2.—Tachi-ai, or watching for an opening. From "The Fighting Man of Japan."

very pleasant hour may be spent over the perusal of this interesting little book. E. W.

#### THE MOTION OF THE MOON.<sup>1</sup>

PER ARDUA AD ASTRA should be the motto for a cultivator of the lunar theory. There is no austere road to prove oneself a man of mettle. *Incredibile studium atque indefessus labor* was Euler's summary upon it, and improvement of method since Euler's time has diminished neither *studium* nor *labor*. The work now brought to completion has occupied Prof. Brown (and a computer) since 1895, almost to the exclusion of other researches, and for some years before that he was busied with developing its methods. Moreover, the present stage is only a level whence he can take breath to proceed.

It is a fact to remember in mathematical astronomy that problems mathematically identical are often astronomically opposite as the poles. The theory of the moon from a geometer's point of view is simply the theory of one of the planets. It is the special values of the constants alone which distinguishes the

<sup>1</sup> "Theory of the Motion of the Moon." By Ernest W. Brown, F.R.S. In the Memoirs of the Royal Astronomical Society, vols. lxxi., liv., lvii.